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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,162	10/25/2001	Igor Katsman	15-DS-00544	4599
7590 Joseph M. Barich McAndrews, Held & Malloy, Ltd. 34th Floor 500 W. Madison Street Chicago, IL 60661			EXAMINER BOUTAH, ALINA A	
			ART UNIT 2143	PAPER NUMBER
			MAIL DATE 10/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/029,162

Applicant(s)

KATSMAN ET AL.

Examiner

Alina N. Boutah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7, 10-12, 14-17, 20, 28-30, 32-34, 37, 38, 40-44, 51 and 52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 10-12, 14-17, 20, 28-30, 32-34, 37, 38, 40-44, 51 and 52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This action is in response to Applicant's amendment filed August 3, 2007. Claims 1-3, 5-7, 10-12, 14-17, 20, 28-30, 32-34, 37-38, 40-44, and 51-52 are pending in the application.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification discloses that the network connection between the ultrasound imaging system and the remote terminal is bi-directional. That is, the ultrasound imaging system transmits unprocessed ultrasound data to the remote terminal while the remote terminal may transmit command data back to the ultrasound imaging system. However, the specification does not mention the use of "processed communication data" or "unprocessed communication data" as claimed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "the operator of a medical imaging device" and "the operator of remote terminal." There is insufficient antecedent basis for this limitation in the claim.

Regarding claims 10 and 37, it is unclear as to what is intended by "processed communication data" and "unprocessed communication data." The terms "communication data" in the claim is a relative term, which renders the claim indefinite. The term "communication data" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 7 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Killcommons (USPN 6,424,996).

Regarding claim 7, Killcommons teaches a system for remotely controlling a medical imaging system, said system including:

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a remote terminal (figure 1: 50) for transmitting commands to a medical imaging system (figure 1: 12, 14 and 20 combined) (abstract – “the browser enhancement module is further adapted to send instructions to the server to assemble and to e-mail selected data from a file to another user unit.” **NOTE** - The instruction, is interpreted as “command” as claimed); and

a medical imaging system (figure 1: 12, 14 and 20 combined) for receiving and executing said commands from said remote terminal (figure 1: 50) (col. 12, lines 6-11 – “Browser enhancement module 54 is configured to instruct server 20 as to how to handle particular medical data and files. Depending on the particular application of the transfer system, the server 20 may handle the data in many ways. Instruction component 60 receives the requests from the user and directs the server 20 accordingly.”),

wherein said commands control at least **one of** pre-processing functions and post-processing functions of said medical imaging system (col. 12, lines 33-37 – “Instruction component 60 may instruct the server 20 to store the new data. In such cases, when the server 20 receives the new data, the data is decoded by the processing unit 24 and place into the server’s storage unit 30. The server 20 may also optionally encode the new data in a standard DICOM format prior to such storage.” **NOTE** – the storing and encoding of data is interpreted as one of pre and post processing functions as claimed).

Claim 34 lists similar limitation as claim 7, but in method form rather than system form. Therefore, the rationale for the rejection of claim 7 can also be applied to the rejection of claim 34.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 6, 10-12, 14-17, 20, 28-30, 32-33, 37-38, 40-44, and 51-52 rejected under 35 U.S.C. 103(a) as being unpatentable over Killcommons (USPN 6,424,996) in view of Groezlinger (US 6,101,407).

Regarding claim 1, Killcommons teaches a system for remotely displaying a medical image, said system including:

a medical imaging system transmitting unprocessed medical imaging data to a remote terminal (figure 1 and its corresponding description col. 7, lines 44-48 – “the dicomizer 14 receives data from modality 12 and conveys the data to server 20 where it may be processed. Dicomizer 1 is an optional component to the information transfer system that converts the raw data into DICOM compliant data.”); and

a remote terminal for receiving said unprocessed medical imaging data, processing said unprocessed medical imaging data to form a medical image and displaying said medical image (figure 1 – server 20 receiving the raw data from the dicomizer 14; figures 2A-2D and their corresponding description in col. 7, lines 55-60 – “server 20 has components for handling data in

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various ways. These components include a data interface (DI) 22 to receive newly acquired data, a processing unit 24 for manipulating the data...”).

However, Killcommons does not explicitly teach wherein said remote terminal sends commands to said medical imaging system. In an analogous art, Groezinger teaches a remote terminal that sends commands to configure output from a medical imager (col. 3, lines 1-19 – “A web server of the medical imager is accessed via a web browser executing on a remote client machine communicatively coupled to the medical imager. Through the web browser, the medical imager is commanded to receive an input image having input pixel data and imaging information from a medical modality. The medical imager is then commanded to generate an HTML document containing the imaging information and pixel data representative of the input pixel data of the input image. The web browser receives the HTML document from the web server of the medical imager and displays the contained pixel data of the HTML document on the client machine according to the imaging information of the HTML document. One of the plurality of the conversion mechanisms of the medical imager is selected based on the displayed pixel data. Finally, the medical imager is commanded to apply the selected conversion mechanism to subsequent input images from the medical modality to form output images on an imaging element.”).

At the time the invention was made, one of ordinary skill in the art would have been motivated to enable the remote terminal to send commands to the medical imaging system in order to allow remote terminal to directly operate the imaging system, without traveling to the hospital, thus relieving burden medical staff (see abstract of Groezinger).

Regarding claim 2, Killcommons teaches the system of claim 1 wherein said remote terminal performs post-processing on said unprocessed medical image data (col. 4, lines 63-65 – “decompressing, decoding and/or decrypting the medical file”).

Regarding claim 3, Killcommons teaches the system of claim 1 wherein said medical imaging system acquired said unprocessed medical imaging data (col. 6, lines 39-67).

Regarding claim 5, Killcommons teaches the system of claim 1 wherein said medical imaging system also transmits audio data to said remote terminal (col. 1, line 66 to col. 2, line 3).

Regarding claim 6, Killcommons teaches the system of claim 1 wherein said medical imaging system also transmits system parameter data to said remote terminal (col. 3, line 58-64).

Regarding claim 10, Killcommons teaches a system for communication between the operator of a medical imaging device and the operator of remote terminal, said system including:

a medical imaging system for transmitting unprocessed communications data to a remote terminal (figure 1 and its corresponding description col. 7, lines 44-48 – “the dicomizer 14 receives data from modality 12 and conveys the data to server 20 where it may be processed.

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Dicomizer 1 is an optional component to the information transfer system that converts the raw data into DICOM compliant data.”); and

a remote terminal for receiving unprocessed communications data from said medical imaging system (figure 1 – server 20 receiving the raw data from the dicomizer 14; figures 2A-2D and their corresponding description in col. 7, lines 55-60 – “server 20 has components for handling data in various ways. These components include a data interface (DI) 22 to receive newly acquired data, a processing unit 24 for manipulating the data...”).

However, Killcommons fails to explicitly teach the remote terminal for transmitting processed communications data to a medical imaging system, said remote terminal transmitting remote commands for execution at said medical imaging system with respect to processing of the communications data.

In an analogous art, Groezinger teaches a remote terminal that sends commands to configure output from a medical imager (col. 3, lines 1-19 – “A web server of the medical imager is accessed via a web browser executing on a remote client machine communicatively coupled to the medical imager. Through the web browser, the medical imager is commanded to receive an input image having input pixel data and imaging information from a medical modality. The medical imager is then commanded to generate an HTML document containing the imaging information and pixel data representative of the input pixel data of the input image. The web browser receives the HTML document from the web server of the medical imager and displays the contained pixel data of the HTML document on the client machine according to the imaging information of the HTML document. One of the plurality of the conversion

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mechanisms of the medical imager is selected based on the displayed pixel data. Finally, the medical imager is commanded to apply the selected conversion mechanism to subsequent input images from the medical modality to form output images on an imaging element.”).

At the time the invention was made, one of ordinary skill in the art would have been motivated to enable the remote terminal to send commands to the medical imaging system in order to allow remote terminal to directly operate the imaging system, without traveling to the hospital, thus relieving burden medical staff (see abstract of Groezinger).

Regarding claim 11, Killcommons teaches the system of claim 10 wherein said communications data is audio data (col. 1, line 66 to col. 2, line 5).

Regarding claim 12, Killcommons teaches the system of claim 10 wherein said communications data is video data (col. 1, line 66 to col. 2, line 5).

Regarding claim 14, Killcommons teaches the system of claim 10 wherein said communications data represents a verbal command (col. 7, lines 23-43).

Regarding claim 15, Killcommons teaches the system of claim 10 wherein said communications data is text data (col. 1, line 66 to col. 2, line 5)

Regarding claim 16, Killcommons teaches a system for remotely post-processing medical imaging data, said system including: a remote terminal receiving unprocessed medical information data, said remote terminal including a remote imaging processor receiving said unprocessed medical information data and post-processing said medical imaging data said remote terminal processing said unprocessed medical information data according to imaging parameters (figure 1 – server 20 receiving the raw data from the dicomizer 14; figures 2A-2D and their corresponding description in col. 7, lines 55-60 – “server 20 has components for handling data in various ways. These components include a data interface (DI) 22 to receive newly acquired data, a processing unit 24 for manipulating the data...”).

However, Killcommons does not explicitly teach, said imaging parameters being controlled by an operator at said remote terminal. In an analogous art, Groezinger teaches a remote control of an imaging system that sends commands to said medical imaging system (col. 3, lines 1-19 – “A web server of the medical imager is accessed via a web browser executing on a remote client machine communicatively coupled to the medical imager. Through the web browser, the medical imager is commanded to receive an input image having input pixel data and imaging information from a medical modality. The medical imager is then commanded to generate an HTML document containing the imaging information and pixel data representative of the input pixel data of the input image. The web browser receives the HTML document from the web server of the medical imager and displays the contained pixel data of the HTML document on the client machine according to the imaging information of the HTML document. One of the plurality of the conversion mechanisms of the medical imager is selected based on the displayed pixel data. Finally, the medical imager is commanded to apply the selected conversion

mechanism to subsequent input images from the medical modality to form output images on an imaging element.”).

At the time the invention was made, one of ordinary skill in the art would have been motivated to enable the remote terminal to send commands to the medical imaging system in order to allow remote terminal to directly operate the imaging system, without traveling to the hospital, thus relieving burden medical staff (see abstract of Groezinger).

Regarding claim 17, Killcommons teaches the system of claim 16 wherein said unprocessed medical imaging data is sent by a medical imaging system to said remote terminal (figure 1 – server 20 receiving the raw data from the dicomizer 14; figures 2A-2D and their corresponding description in col. 7, lines 55-60 – “server 20 has components for handling data in various ways. These components include a data interface (DI) 22 to receive newly acquired data, a processing unit 24 for manipulating the data...”).

Regarding claim 20, Killcommons teaches a remote terminal for use in a medical imaging system for remotely displaying a medical image, said remote terminal including:

a remote data processor receiving unprocessed medical imaging data and preprocessing said unprocessed medical imaging data (figure 1 – server 20 receiving the raw data from the dicomizer 14; figures 2A-2D and their corresponding description in col. 7, lines 55-60 – “server

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20 has components for handling data in various ways. These components include a data interface (DI) 22 to receive newly acquired data, a processing unit 24 for manipulating the data...");

a remote imaging processor for post-processing said medical imaging data to form a medical image (col. 4, lines 63-65 – “decompressing, decoding and/or decrypting the medical file; transferring the medical file to a display”); and a display for displaying said medical image (figure 4).

However, Killcommons does not explicitly teach a remote console controlling imaging parameters at said remote imaging processor and relaying commands through said remote data processor to an imaging system.

In an analogous art, Groezinger teaches a remote console controlling imaging parameters at said remote imaging processor and relaying commands through said remote data processor to an imaging system (col. 3, lines 1-19 – “A web server of the medical imager is accessed via a web browser executing on a remote client machine communicatively coupled to the medical imager. Through the web browser, the medical imager is commanded to receive an input image having input pixel data and imaging information from a medical modality. The medical imager is then commanded to generate an HTML document containing the imaging information and pixel data representative of the input pixel data of the input image. The web browser receives the HTML document from the web server of the medical imager and displays the contained pixel data of the HTML document on the client machine according to the imaging information of the HTML document. One of the plurality of the conversion mechanisms of the medical imager is selected based on the displayed pixel data. Finally, the medical imager is commanded to apply

the selected conversion mechanism to subsequent input images from the medical modality to form output images on an imaging element.”).

At the time the invention was made, one of ordinary skill in the art would have been motivated to enable a remote console to control imaging parameters at said remote imaging processor and relaying commands through said remote data processor to an imaging system in order to allow remote terminal to directly operate the imaging system, without traveling to the hospital, thus relieving burden medical staff (see abstract of Groezinger).

Regarding claims 28-30 and 32-33 are similar to claims 1-3 and 5-6, respectively, therefore are being rejected under the same rationale.

Claim 37 lists similar limitation as claim 10, but in method form rather than system form. Therefore, the rationale for the rejection of claim 10 can also be applied to the rejection of claim 37.

Regarding claim 39, Killcommons teaches the method of claim 37 wherein said communications data is uncompressed raw data (figure 1 – server 20 receiving the raw data from the dicomizer 14).

Regarding claim 40, Killcommons teaches the method of claim 37 wherein said communications data is video data (col. 1, line 66 to col. 2, line 5).

Regarding claim 41, Killcommons teaches the method of claim 37 wherein said communications data represents a verbal command (col. 1, line 66 to col. 2, line 5).

Regarding claim 42, Killcommons teaches the method of claim 37 wherein said communications data is text data (col. 1, line 66 to col. 2, line 5).

Claim 43 lists similar limitation as claim 16, but in method form rather than system form. Therefore, the rationale for the rejection of claim 16 can also be applied to the rejection of claim 43.

Regarding claim 44, Killcommons teaches the method of claim 43 wherein said unprocessed medical imaging data is sent by a medical imaging system to said remote terminal (figure 1 – sending raw data from dicomizer to the server).

Regarding claim 45, Killcommons teaches the method of claim 43 wherein said remote terminal processes said unprocessed medical information data according to imaging parameters

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(figure 1 – server 20 receiving the raw data from the dicomizer 14; figures 2A-2D and their corresponding description in col. 7, lines 55-60 – “server 20 has components for handling data in various ways. These components include a data interface (DI) 22 to receive newly acquired data, a processing unit 24 for manipulating the data...”).

Regarding claim 46, Killcommons teaches the method of claim 45 wherein said imaging parameters are controlled by an operator at said remoter terminal (abstract – remote browser sending instructions to server).

Regarding claim 51, Killcommons teaches an imaging system for use in a medical imaging system for remotely displaying a medical image, said imaging system including: a data processor externally transmitting unprocessed medical imaging data for processing (figure 1 – server 20 receiving the raw data from the dicomizer 14).

Regarding claim 52, Killcommons teaches the imaging system of claim 51 further including a data acquisition processor acquiring imaging data and sending said imaging data to said data processor (figure 1 – server 20 receiving the raw data from the dicomizer 14).

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US Patent No. 5,970,457 issued to Brant et al.
2. US Patent No. 6,656,119 issued to Sasaki et al.
3. US Patent No. 6,847,336 issued to Lemelson et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alina Boutah
Patent Examiner
AU 2143